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C09D201/00**C09D 7/12**(21)Application number : **2000-206264**(71)Applicant : **DOKAI CHEMICAL INDUSTRIES CO LTD**(22)Date of filing : **07.07.2000**(72)Inventor : **TERASE KUNHIKO
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(30)Priority

Priority number : **2000139659** Priority date : **12.05.2000** Priority country : **JP****(54) TRANSPARENT COATING FILM CONTAINING SILICA PARTICLE WITH SCALE STRUCTURE**

(57)Abstract:

PROBLEM TO BE SOLVED: To provide a silica-containing opaque cured coating film with transparency.

SOLUTION: An opaque cured coating film containing a transparent organic high-molecular substance and foliate silica secondary particles formed in such a way that the flaky primary particles of silica with a scale structure are plurally superposed on each other with their planes oriented in parallel to each other is made transparent by forming on the surface of the film a topcoating layer comprising a transparent organic polymer, alternatively, for example, by undergoing such a treatment as to bring the size of the silica particles to a value below the lowest level of a specific range.

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1. This document has been translated by computer. So the translation may not reflect the original precisely.
2. **** shows the word which can not be translated.
3. In the drawings, any words are not translated.

CLAIMS

[Claim(s)]

[Claim 1] A hardening paint film with the primary flake particle of a scale-like silica transparent on the real target with which orientation is carried out in parallel and between fields is mutually characterized by being a paint film containing the secondary foliaceous silica particle and the transparent organic polymeric material which are formed by two or more sheets lapping, and the permeability of light with a wavelength of 500nm converted into the paint film thickness of 50 micrometers of the paint film concerned being 70% or more.

[Claim 2] A hardening paint film with the primary flake particle of a scale-like silica transparent on the real target with which orientation is carried out in parallel and between fields is mutually characterized by being a paint film containing the secondary foliaceous silica particle and the transparent organic polymeric material which are formed by two or more sheets lapping, and the paint film which consists of finishing coat of a transparent organic polymeric material, and the permeability of light with a wavelength of 500nm converted into the paint film thickness of 50 micrometers of the paint film concerned being 70% or more.

[Claim 3] The hardening paint film according to claim 1 or 2 whose mean particle diameter of the aforementioned secondary foliaceous silica particle is less than 1 micrometer.

[Claim 4] The hardening paint film according to claim 1 to 3 whose secondary foliaceous silica particle in the hardening paint film concerned is the silica to which the main peak in X-ray diffraction analysis corresponds to silica-X and/or silica-Y.

[Translation done.]